PHILADELPHIA NEUROLOGICAL SOCIETY.

Stated Meeting, December 22, 1884.

Vice-President, Dr. CHAS. K. MILLS, in the chair.[1]

Dr. MILLS read a paper on "The Treatment of Epilepsy," of which the following is an abstract:

His remarks applied chiefly to the medicinal treatment of epilepsy proper—grand mal and petit mal. He did not intend to refer to the treatment of convulsive seizures due to tumors, meningitis, spinal diseases, etc.

As to the curability of epilepsy, some apparently authentic cases of cure were on record. After looking over the subject, he could only recall seven cases of apparent or real cure in his own practice, private and hospital. In all of these the attacks remained away for from more than one to more than three years. Gowers mentions a number of cures, at least cases in which seizures had not recurred for as much as four, five, six, or seven years. Several of these cases were children. Three of the seven cases alluded to by Dr. Mills were children. All observations as to the cure of epilepsy were necessarily imperfect. After a number of years the attacks recur again. Although, however, the absolute curability of epilepsy might be doubtful, certainly great benefit from treatment is to be derived in most cases. It is a wrong to such patients not to treat them.

He had used the following remedies, singly, three or four times daily, in a series of cases, during the last ten years: Bromide of potassium, grs. x to ʒ j; bromide of sodium, grs. x to ʒ j; bromide of ammonium, grs. x to ʒ ss; monobromide of camphor, grs. iij to vj ; hydrobromic acid, f ʒ ss to f ℥ ss; iodide of potassium, grs. v to ʒ ss; biborate of sodium, grs. xv to xx ; chloral hydrate, grs. x to xv ; oxide of zinc and valerianate of zinc, grs. iij to x ; nitrate of silver, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$; tincture of belladonna, ♏x to xv, or extract of belladonna, gr. $\frac{1}{4}$ to gr. $\frac{1}{2}$; extract of cannabis indica, gr. $\frac{1}{8}$ to gr. $\frac{1}{4}$; fluid extract of cocculus indicus, ♏j to iij, or tincture of cocculus indicus, ♏v to x ; nitrate of potassium, grs. v to viij. Other remedies which he had only used in combination with some of the above drugs, were as follows: Conium juice, f ʒ j, or fluid extract, ♏iij to x ; tincture of digitalis, ♏v to x ; sulphate of strychnia, gr. $\frac{1}{40}$ to $\frac{1}{30}$; Fowler's solution of arsenic, ♏ij to v ; fluid extract of ergot, f ʒ j to f ʒ ij, or extract of ergot (Squibbs), grs. iij to vj ; iron, cod-liver oil, and quinine.

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[1] The report of this meeting should have appeared in our last number.

The bromides were certainly the best remedies, and the bromide of potassium, in his opinion, stood at the head of the list. The bromide of sodium came next best to the bromide of potassium. He thought the bromides affected the nerve centres directly. The mixed bromides were better, usually, than any one of them used singly.

The bromides could be advantageously combined with other drugs. The combination which he had found, on the whole, the best for long-continued use was: Bromide of potassium, grs. xv ; bromide of sodium, grs. xv ; solution of the arsenite of potassium (Fowler's solution) ♏ij ; conium juice, f ʒ ss, or the fluid extract of conium, ♏iij to v. This was generally made up with syrup of orange and some bitter infusion. Another good combination, mentioned also by Gowers, was the bromide of potassium and tincture of digitalis. It was only especially valuable in cases complicated with weak heart or mitral disease. Monobromide of camphor had no advantage over the bromides. Hydrobromic acid was efficient in very large doses, but so much water had to be given with it that the amount to be swallowed was appalling to the patient. It sometimes irritated the stomach. Borax was not of established value, but helped a few cases temporarily. He found the iodide of potassium, unless especially indicated, had little value when used alone in the treatment of epilepsy. Chloral hydrate is not of much value when given alone, but with the bromides, in cases uncomplicated with cardiac disease, sometimes makes a useful combination. Trousseau's belladonna had been used without noteworthy success. Cannabis indica was not to be depended upon. He had tried cocculus indicus in six cases at the Philadelphia Hospital. None improved, and four were made worse by its use, one of the four becomming insane while taking the drug. At the request of Drs. Reichert and Hinsdale, he had used the nitrite of potassium in seven cases. Of these only one seemed to be benefited, and some were made worse by its use. When the bromides had to be stopped, the zinc salts or the nitrate of silver were the best substitutes ; but they could only be relied on for a short time.

The way to treat epilepsy, in his opinion, was to simply have a plan of treatment, and carry it out over a series of months or years. He would, for instance, first put a patient upon a single bromide—say fifteen grains three times a day —to be increased until a decrease in the number and severity of the paroxysms was produced. He kept him upon this perhaps for a month. He then used the mixed bromides, or some combination of bromides with other drugs, preferably the bromides, arsenic, and conium prescription. He watched the condition of the patient, and, if necessary, put him on cod-liver oil, quinine, or iron. With reference to nitrates, bromates, etc., he said that there was probably some chemical or chemico-physiological reason for inefficiency. The *ites* and *ates* would probably *never* give as good result as the *ides*. Dr. Mills believed with Dr. Pepper (*Med. and Surg. Reporter*, January 12, 1884), that close attention should be paid to every point in the daily life of an epileptic—to diet, rest, and hygiene ; but he did not, with his present experience, believe that a genuine case of thoroughly developed epilepsy could be cured, or even greatly benefited, without drugs. Harm, however, might be done by over-use of drugs.

Among the surgical and external means of treatment he had successfully used, were excision of cicatrix, removal of neuroma, actual cautery, and blistering to the neck or head. He says he did not use counter-irritation to the scalp, but was a strong believer in the actual cautery, used after Brown-Séquard's method, to the nape of the neck.

DISCUSSION.

The discussion was opened by Dr. E. T. REICHERT. He said that the efficacy of the bromides was certainly not due to the bromine, for bromide of potassium is the best of the bromides, and it contains less bromine than any of the others. The amount of bromine in the chief bromides, as given by Gowers, is as follows:

Bromide of ammonium	81 per cent.
Bromide of potassium	67 per cent.
Bromide of sodium	77 per cent.
Bromide of lithium	92 per cent.

All the bromides act alike, but with varying degrees of efficiency. The bromates, nitrites, etc., are not as useful as the bromides. A certain line of similar chemical salts seem to give uniform physiological and therapeutical results.

Dr. GUY HINSDALE said that, in regard to the cases in which Dr. Mills used the nitrite of potassium, some four years ago, one was benefited, some remained the same, while others were apparently made worse by its use.

Dr. WHARTON SINKLER wished to know if any of the members of the Society had used hyoscyamus, and with what results. He said that Althaus, of London, reported cases in which tincture of hyoscyamus had been used successfully, in doses of from one, two, or three drachms. He said that he had reported one case of epilepsy which had been greatly benefited by cannabis indica, after the bromides and other remedies had failed.

Dr. H. M. WETHERILL said that, in his experience, the bromide of potassium was the best remedy. He said he had never tried the tincture of hyoscyamus. He had never seen a case of epilepsy entirely recover.

Dr. F. DERCUM said that his experience was summed up in the statement that he had found the bromides the best.

Dr. MORRIS LEWIS spoke of the cure of a child, three years old, at the Episcopal Hospital, in which he could obtain no results with the bromide of potassium. The seizures continued, and were worse, if any thing. He then resorted to bromide of ammonium, and with immediate good results.

Dr. J. H. LLOYD said he thought that in cases of epilepsy attention to the digestive functions and to sleep was highly important. He called attention to the observation of Dr. Radcliffe, that epileptics have a tendency to over-eat and to sleep too much. In his own experience he had found that when constipation was present the seizures were likely to be more frequent and severe. Dr. Radcliffe and other English physiologists seemed to prefer comparatively small doses of the bromides long continued. Dr. Lloyd believed the combination of three bromides with the iodide of potassium to be one of the best in the treatment of epilepsy.

Dr. A. J. PARKER said he believed we could not say that the effect of a drug like bromide of potassium, bromide of sodium, etc., was due either to the bromine, or potassium, or the sodium, etc. Each of these salts is an individual drug, each molecule of which has its own form of motion. Bromine is a substance with its own peculiar molecular condition of motion. Potassium, similarly, has its own motion. Bromide of potassium is the resultant of the two motions. Certain members of the same chemical families, as the bromides, iodides, and chlorides, would seem to go together in therapeutical efficacy, due to similarity of their forms of molecular motion. At any time, we may expect, however, to find wide differences, since our chemical equations simply represent an idea of structure, and tell us nothing concerning the form of molecular movement ; and therapeutic effects must certainly depend more on the energy and form of motion that upon any other qualities.

Dr. E. T. REICHERT made a few remarks on "The Use of Hydrobromic Acid and the Bromides in Sea-Sickness."

He said, while crossing the ocean, he had the opportunity of studying the effect of hydrobromic acid and some of the bromides in sea-sickness. Hydrobromic acid was effectual, but had to be used in such large doses that, owing to the dilution with water necessary, the bulk to be taken was excessive. The bromides were therefore, he thought, to be preferred. Bromide of sodium, in large doses, was effectual in one bad case. He believed that all the bromides were good.

Dr. J. M. TAYLOR spoke of "The Use of Nitrite of Potassium in Angina Pectoris."

In an aggravated case of angina pectoris he had obtained very good results with nitrite of potassium. The patient had been suffering for over a year with paroxysms of increasing intensity, until death seemed imminent. After giving the nitrite of potassium for four weeks, the patient recovered. Nitrite of amyl was used sparingly, to control the paroxysms. LEWIS BRINTON, M.D., *Recorder.*

Stated Meeting February 23, 1885.

The President, Dr. S. WEIR MITCHELL, in the chair.

Dr. H. C. WOOD read a paper on "Chorea," and presented a patient with post-paralytic chorea of peculiar character. He also exhibited a dog suffering from chorea, chiefly affecting the hind legs; and gave the results of some physiological experiments which seemed to point to the spinal origin of at least some choreas.

The discussion on Dr. Wood's paper was opened by Dr. CHARLES K. MILLS, who said he did not fully agree with Dr. Wood in regard to the spinal origin of chorea. As to the treatment of such a case as he presented, with movements limited to one limb, he thought that nerve-stretching might give at least temporary relief. He mentioned cases of athetosis which had been operated on in this way, in which the movements remained away for many months. He also mentioned a case of spastic paralysis in which nerve-stretching proved partially successful.

Dr. WHARTON SINKLER said he could not agree with Dr. Wood's spinal theory if he meant to apply it to children.

Dr. A. J. PARKER referred to the researches which Dr. Dercum and he had made some time ago, and which had been presented to the Society. He said that one inference that might be derived from their experiments was that certain choreic as well as other convulsive movements were not of spinal origin, but were due to disturbance of the equilibrium of the entire nervous system.

Dr. DERCUM made some remarks to the same import.

Dr. CHARLES K. MILLS exhibited the brain and a cast of the skull of James Burke, a delusional monomaniac, who killed several persons ; also the brain of L. W. Beach, the uxoricide.

Dr. J. K. MITCHELL read a paper on "A Case of Paralysis, with Hypertrophy of Muscular, Cutaneous, and Alveolar Tissues."

Stated Meeting March 23, 1885.

The President, Dr. S. WEIR MITCHELL, in the chair.

An abstract of the paper by Dr. J. T. ESKRIDGE on "Tumor of the Cerebellum, with Monocular Hemianopia,"[1] which was presented at the January meeting of the Society, and the discussion on which was postponed, was read.

The discussion was opened by Dr. CHARLES K. MILLS, who said that Dr. Hughes Bennett had reported a remarkable case of brain tumor where there was no neuritis, but hysteria was present for many years.

Dr. W. SINKLER spoke of the value of ophthalmoscopic examination in such cases.

Dr. MITCHELL said it was very common to have hysterical symptoms in cases of tumors of the brain.

Dr. LAMBERT OTT said that while in the wards of the Jefferson Hospital, Dr. Eskridge was kind enough to show me this case. When I first saw her she appeared to me as a pale, anæmic, simple-minded, hysterical woman. After his examination, she asked him for permission to go home, and before he could reply she burst into a violent fit of crying, which was not appeased by a most favorable reply. After he had repeated some points of his examination, she again made the request, with the same emotion increased in intensity, and no amount of promising could subdue her until she had exhausted herself. The question of headache in cerebellar disease is of interest to me on account of a case I reported in the *Med. Times*, November 6, 1880, of abscess occupying the entire right side of the cerebellum, where there was absolutely no other symptom except a severe headache, which was confined to the right occipital region, corresponding to the side of the lesion, and during the violent exacerbations the pain became diffused, but the seat of intensity remained over the lesion. In Dr. Eskridge's case, the pain was not so much localized, but was more diffused, and mostly confined to the top and frontal region. In other reported cases where the tumor of the cerebellum was large, the pain in the head was more diffused, whereas small tumors and abscesses of the same region produced more or less localized headache.

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[1] For a full report of this case, see this JOURNAL and vol., p. 1.

The next paper read was entitled "Notes on the Idiot Skull and Brain," by A. W. WILMARTH, M.D., Assistant Superintendent Pennsylvania Training School for Feeble-Minded Children.

While fully conscious that the value of statistics depends on their amplitude, and that the number of cases I have to present to-night is comparatively small, yet the literature on the pathology of idiocy is meagre, and even the few cases I shall endeavor to describe in this paper may be of interest to those who have made a special study of the nervous system and its diseases.

Asymmetry of the skull in idiots has received considerable attention. The characteristic forms accompanying microcephalic and hydrocephalic brains are too well known to require any mention here. Slight deformities, aside from evidence they may furnish of former violence, would hardly seem to be of much importance as affecting the soft and yielding brain beneath.

Asymmetry of the vault, with the exception which I will shortly describe, is not of frequent occurrence among our children.

Among the cases in our institution are a noticeably large number who have behind and before the ear (commonly the right) a considerable depression. In a very few of these cases, a second depression exists in the opposite temporal region. Unfortunately it is difficult to obtain facts in relation to the birth of these children. In two cases where depressions exist near the right ear and left temple, a reliable history of a difficult forceps delivery has been obtained. Both of these children, who were among the more intelligent groups, were aphasic. We have been led to believe from these, and from other similar cases, that the violent localized pressure of the valuable obstetric forceps on the fœtal head is not always so harmless as it is generally believed to be.

Hypertrophy of the skull has been found in only one case ; the skull in some parts of the section being a full half inch thick.

Our attention has been frequently attracted to peculiarities about the interior of the base of the skull in congenital idiots and imbeciles.

These consist principally of projection of the bony prominences beyond their normal limits, particularly observable in the lesser wing of the sphenoid and the petrous portion of the temporal bone ; less frequently stenosis of the foramen magnum is found. This was seen in three cases, two of which were epileptics.

Deformity of the crista galli is also common, it being more pyramidal in shape, and bent to the right or left. Even more frequently we find encroachment of the middle and posterior clinoid processes on the pituitary fossa, in some cases nearly closing the upper portion of the fossa.

Localized thickening of the membranes with adhesion to the brain is frequently found. In two cases out of fifteen observed, this adhesion was general, and any attempt to separate them brought away portions of the cortex.

Sixteen brains from idiot and imbecile children were deprived of their membranes, where practicable, dissected, drained for one hour, and then carefully weighed.

The average weight was found to be thirty-six and a half ounces. In all but two cases the patient was over fifteen years of age. One brain taken from an idiot boy weighed fifty-one ounces. From its firm consistency we were led to suspect hypertrophy. One child of eleven years had a brain weighing only twenty-two and three fourths ounces. In another case, a girl of nine years, the brain weighed twenty-five and one fourth ounces. Still another, a young man of twenty-two, had a brain weighing twenty-five and one fourth ounces.

As a rule, in these cases the weight has been directly proportional to the intelligence of the case to which the brain belonged.

The weight of the cerebellum varied from three and a half to six and a quarter ounces, with an average weight of four and three-quarter ounces. In two cases where the weight of this organ was three and a half and three and three-quarter ounces respectively, both cases were mutes and paralyzed.

According to Sharpey and Gray, the relative weight of the cerebellum and cerebrum is $1:8\frac{4}{7}$ in the male, and $1:8\frac{1}{7}$ in the female. In sixteen cases, of which thirteen were males, the proportional weight was found to be $1:7\frac{1}{2}$ or, counting only such cases as were certainly congenital (ten in number), the ratio was 1:7, making a marked contrast between the relative development of the cerebrum and cerebellum.

Clevenger, in an article on the relation of the position of the fissure of Rolando to intelligence (JOURNAL OF NERVOUS AND MENTAL DISEASE, 1880), lays down this rule: If the superior arc of the hemisphere, along the great longitudinal fissure, be divided into ten equal parts, the distance from the tip of the frontal lobe to the superior extremity of the fissure of Rolando, would represent from six to six and a half of these parts.

In seventeen brains measured by me, these distances were as five and three eighths to ten.

The frontal lobes are often more narrow and pointed, and show a simplicity of convolution development that forms a decided contrast to the normal brain.

Deficient development in this portion of the cerebrum is most evident in the third frontal convolution, where a small operculum tends to leave the anterior convolutions of the island of Reil exposed.

In six out of sixteen brains the island was not completely covered. In four cases the exposure was evident on both sides; in two cases, on one side only. In four cases it was very slight; in two cases, marked.

The case of C. M., an apathetic idiot and mute, presents points of considerable interest. No motor or sensory disturbance was apparent during life, except defective vision. The exact extent of this infirmity we were never able to ascertain during life, owing to his low grade of intellect.

While it was very evident that sight was not perfect, he could certainly see well enough to find his way around without difficulty, and to distinguish objects and persons.

After death the following portions of the cerebral cortex were found thin, soft, and wrinkled : the posterior horn of the lateral ventricle being much dilated, and the undeveloped portions of brain substance not over one eighth to one fourth of an inch in thickness.

On the left side were involved the posterior portions of the supra-marginal, the angular posterior portion of the superior parietal, and a considerable portion of the second and third temporal, convolutions. On the right side, the second and third occipital, the angular, the posterior part of the supra-marginal and third temporal, convolutions.

The cuneus on either side was very small. In the usual situation of the angular gyrus no normal brain tissue existed; all other portions of the brain below the cortex, supposed to be connected with sight, appeared normal.

In eight out of eighteen brains the cerebrum failed to cover the cerebellum.

Two cases of defective corpus callosum have been found.

I copy the following notes from our post-mortem records :

"L. A., aged nine, mute ; can neither walk nor speak ; left arm and leg paralyzed ; died in an epileptic convulsion.

"The brain, on removal, showed a tendency to flatten out, the hemispheres separating from each other. On pulling them apart, no corpus callosum was found, its place being supplied by a fold of membrane passing from one hemisphere to the other, through which the fluid of the ventricles could be seen. No trace of a septum lucidum or a velum interpositum was found. The anterior pillars of the fornix, instead of joining, passed directly back to the hippocampal region. Anterior and posterior commissures normal. Instead of a middle commissure, the optic thalami were joined together for a space three eighths of an inch in diameter.

"On making a transverse section of the hemisphere, a projecting process, about three eighths of an inch in length, was seen on either side, in the usual situation of the extremity of the corpus callosum. The gray matter of the gyrus fornicatus was continued along the upper surface of the process, over the end, growing thinner on the lower surface, and giving place to the ependyma of the ventricle."

A block of sclerosis in the right central region explained the paralysis in the left side.

A smaller block existed in the right occipital lobe; while from the movements of the child, and his manner of turning his eyes, we were led to suspect left hemianopsia; but of this we have no certain assurance.

Another case was H. F——, aged eleven. A profound mute; unable to walk; of a very low grade of intelligence. Died of chronic meningitis. The corpus callosum in this case consisted of a narrow band, five eighths of an inch in width, and not over one twentieth of an inch in thickness. So slight was the connection, that in using very slight force to separate the hemisphere sufficiently to photograph the parts, it tore apart. Back of this portion the two parts, very thin and having a sharp edge, separated rapidly. The posterior portions were entirely absent. The septum lucidum was absent. Velum interpositum present, but incomplete. The commissures were all present, but very small. The pillars of the fornix were not connected with each other, and followed the same course as in the other brain.

No trace of a pineal gland was found. Development of the corpus callosum must have stopped at an early period of fœtal life.

The heart was small, weighing less than two ounces. The right auriculo-ventricular valve admitted the tip of the little finger only by using force.

The genital organs were peculiar. An enlarged clitoris, fully an inch in length. A vagina divided into two nearly equal parts by a longitudinal membranous partition, terminated by a small uterus, much flattened in its antero-posterior diameter, and not over an inch in length. In the upper part of the uterus was a cavity which communicated by separate passages with the two parts of the vagina. Ovaries and fallopian tube normal.

Three cases, all of them confirmed epileptics, have been found with destructive lesions of the hemispheres.

1. A case of paralysis of the right arm and leg, complete in the arm, less so in the leg, with progressive aphasia, which had become nearly complete at the time of death. With the infirmity mentioned, a decided change in his disposition occurred, the boy becoming excessively irritable, and even violent at times. Two

patches of sclerosis were found ; one in the upper third of the ascending frontal convolution, the other at the junction of the middle and upper thirds of the same convolution. The aphasia was probably due to the lower mass of sclerosis, which extended quite deeply into the brain substance, implicating the fibre leading from Broca's convolution. There was no sensory disturbance in this case.

2. In a case dying of apoplexy, a small spot of white softening was found in the superior parietal convolution near the parietal occipital fissure. There was no symptom that indicated its presence during life except an occasional spasm.

3. A case where atrophy and hardening of the left hippocampus major was found. No accurate examination for symptoms was made during life. We are sure there was no paralysis. During the last months of her life here, with the frequent occurrence of violent spasms, her memory failed fast. Piano-playing, of which she was very fond, was gradually given up, not because of inability to use her fingers, but because she could not remember her notes. The same was true of needle-work, in which she had been quite expert. She apparently forgot how to do it. To the last she would button a girl's dress neatly and quickly, from which we infer there could have been no decided loss of tactile sensation.

It is in the arrangement of the convolutions that some of the most interesting features are met. In congenital imbeciles, and particularly in idiots, striking differences are found.

One type of brain, in this class of children, is very simple in its outward configuration. The convolutions are usually coarse, but little convoluted, and comparatively free from secondary folds. The fissures tend to assume a confluent type, and as we pass to lower grades of intellect this tendency increases.

Another variety, found so far among the lowest grades of idiocy, might well be termed an "atypic" variety. The brain previously described as without a corpus callosum, is a marked example of this type. The short description I present can be readily followed by means of these photographs.

In the frontal lobe of the right hemisphere the first frontal convolution is quite regular. Below this, from the centre of the lobe, seven radiating fissures pass in different directions, cutting the tube into a number of radiating convolutions, entirely different from its usual appearance. The short fissure of Sylvius, about three inches in length, passes upward, turns sharply at nearly a right angle, and passes almost directly backward. Two parallel gyri curve round its posterior extremity. The arrangement of the convolution of the temporal and parietal lobes are so exceedingly irregular and complex, that it is impossible to classify them. In the occipital lobe, on the contrary, the gyri are complete in number and regular in their arrangement.

In the left hemisphere the arrangement of the frontal convolutions is more regular, but the temporal and parietal lobes present the same complicated area of surface folding, bearing but little resemblance to the normal brain.

The tendency of the convolutions to arrange themselves in parallel curves around the posterior extremity of the fissure of Sylvius, is well shown in this brain of F. N., a boy of exceedingly low intellect. The frontal lobes in this brain are proportionately large, the convolutions straight, especially the third frontal; the fissure shallow. In the left temporal lobe they are nearly obliterated from pressure of fluid in the ventricles. The ascending frontal convolution on each side appears to be wanting. On the left side a large bridging convolution crosses the middle of the fissure of Rolando.

A few other points deserve notice. Confluence of fissure, I have already mentioned as a decided feature of idiot brains. Even where confluence is not complete, the tendency of the principal fissures to cut through separating convolutions is very evident; and should I include in the cases below those where confluence is *nearly* complete, the number would be considerably augmented. In these cases confluence is complete, and the examination comprises fifteen brains from children of all grades of imbecility.

The fissure of Sylvius passes into the fissure of Rolando, in one case on both sides, in another on one side only. In two other cases they are connected by deep secondary fissures.

The inter-parietalis has its orgin in the fissure of Sylvius, in four cases on both sides, in five cases on one side only.

The calcarine fissure passes completely across the gyrus fornicatus; on both sides in two cases, on one side in four cases.

In one case the first occipital convolution sank nearly beneath the surface, the next occipital gyrus projecting over it, forming a partial operculum.

There also seems to be a strong tendency to form annectant gyri in the upper part of the parieto-occipital fissure. In no less than six hemispheres of the fifteen brains were these supplementary gyri found more or less complete.

In one case on both sides, in five cases on one side, we find the parieto-occipital fissure cutting through the first occipital convolution into the inter-parietal fissure. A tendency of the transverse occipital fissure to approach the parieto-occipital fissure is very apparent, though in no case do they coincide.

I will close these remarks without further comment. Why the folds of the cerebral cortex, from a lack of the stimulus of healthy growth, should assume the forms we have seen them possess, sometimes reverting to forms resembling those found in other groups of the animal kingdom, again forming a tangled group bearing little resemblance to what we usually find on the brain surface, we can scarcely venture to attempt to say.

While in a few cases lack of development or coarse lesion, which can be recognized by the unaided eye, may readily account for the loss or congenital want of mental power, in more instances grave impairment of brain-power exists without commensurate lesion, and in the microscope, if in any thing, we shall find the means of unravelling the mystery.

The paper was discussed by Drs. CHARLES K. MILLS and A. J. PARKER.

The following cases were shown to the Society by Dr. S. WEIR MITCHELL: "Atrophy of Upper Half of Body with Well-Developed Lower Half."

CASE I was that of a girl, eleven years old, in which her limbs were well developed, while the upper part of the body was atrophied.

"Two Cases of Spinal Disease with Unusual Symptoms."

CASE 2. Patrick M., æt. 50, Irish, married; no specific history; no previous illness; fell while wheeling barrow three years since; no injury to spine. Soon after noticed burning pain in left foot. Two months after, fell again, without warning, while in house. Soon recovered and went home, and to work twenty-four hours after. Worked with difficulty six months; stopped, and has grown gradually worse ever since. Pain, heat, formication in legs. Occasional spasmodic rigidity in legs at night. No loss of sensation. Faradic reactions normal. Ankle clonus; patellar reflex exaggerated. Cremaster, abdominal, epigastric, and scapular reflexes, present. Reflex action on percussion of deltoid, biceps, or triceps tendons, or extensor tendons at wrist. The chin reflex, noticed by Dr. M. J. Lewis, is present. Sensation in legs is peculiar. On the foot and ankle, and part way up the lower leg, a needle prick was felt as a prick, and perfectly distinguished from a touch. The surface was analgesic, but pain was produced on deeper pricking. From the middle of the leg up, the sensation improved gradually to the level of the eighth dorsal vertebra; above this, it was natural. A prick, or a pinch, or sometimes even a touch, produces spasmodic jerk of muscles; if touch on leg, of soleus; on thigh, of quadriceps; great exaggeration of all reflexes. Ankle clonus. Tetany, if blow on patella is repeated; "spinal epilepsy" (Brown-Séquard); epigastric and abdominal reflexes present. A weak faradic current applied to the nerves produced normal contractions in the supplied muscles; contraction by direct application, like normal. Thickening of skin and areolar tissue of leg, somewhat like Mrs. S., but here appears to be atrophy of muscles.

CASE 3. Mary M., 18, U. S., mill-hand; family history good, except that her father died of consumption, The patient has never had any serious illness. About two years since she discovered on the left side a spot which she does not describe as painful, but says that she had a "curious feeling" in it. Soon after, at a party, she wished to dance, but found herself so lame in the left leg as to make dancing impossible. The toe dragged when walking, and the feebleness of the leg increased slowly, spreading from below upward. At the end of a year the right leg began to weaken, first in the thigh, and then gradually downward, until she was unable to move about or stand without assistance. This complete loss of power has now lasted about eight months She is, she says, weak in the back, and has sometimes numbness of the inner side of the forearms and hands. She can assign no cause for the trouble.

Dr. MORRIS J. LEWIS made the following remarks on "The Chin Reflex. A New Clinical Observation":

In the winter of 1882, while examining at the Infirmary for Nervous Diseases connected with the Orthopædic Hospital, Phila., a case of section of the inferior dental nerve, I discovered a new reflex. For report of the case see *Phila. Med. News*, March 11, 1882. This consists of a sudden elevation of the lower jaw immediately following a blow upon the lower teeth, or chin, and is most easily produced by striking the parts mentioned in a downward direction with a rubber plexor. The mouth of the patient is of necessity open, and the muscles should be relaxed.

Since then I have observed this symptom in two cases of spastic paralysis, one case of congestion of the spinal cord, one of cerebral tumor, probably specific, one of hemiplegia, one of unilateral tumor of doubtful origin, and occasionally in perfectly healthy individuals.

In some of these the reflex was plainly due to a contraction of the temporal muscles, while in others the masseters seemed to be mainly instrumental in causing it. The clinical significance of this symptom is not as yet clear, but I wish to place it upon record, and to direct attention to it, hoping later to be able to report more fully.

Gowers, in his "Diseases of the Spinal Cord," mentions that irritation of the skin in the intrascapular region gives us the highest reflex available; the *chin reflex* is, therefore, of considerable interest, as being, as far as I am aware, *the highest deep reflex yet discovered.*

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